

Chapter 6 Understanding NASIS Objects, Tables, and Elements

Chapter 1 introduced the concept of objects and tables. This lesson focuses on navigating within the objects and across object boundaries. So far, you've run queries and built a selected set using data from a single NASIS object, the Area Type object.

Navigating within the Area Type Object

NASIS stores more than just traditional soil survey areas. Because there are several kinds of areas, they are organized by *area type*. This lesson assumes that you have run the query in Chapter 5 and loaded all area types and areas in the tutorial database. Refer to pages 5.2-4 if necessary.

1. If you have not already done so, open the Area Type table by selecting the **View** menu, **Area Types**, then **Area Type**.

Note: The Area Type window is displayed on your screen. In a later lesson, you will examine the columns of the tables in the Area Type object. This lesson focuses exclusively on navigating and understanding the NASIS structure. Figure 6-1. Area Type Objects and Tables, shows the three tables that comprise the Area Type object. Although the query focused on the Area table, your selected set presently contains all six area types and all areas in the tutorial database. The Area Types are shown in the screen capture on the next page.

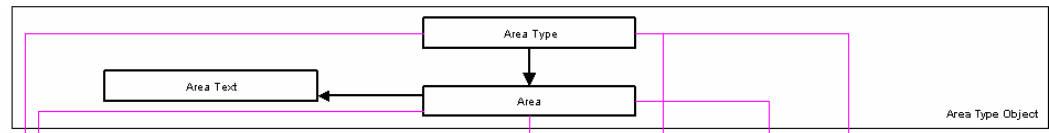


Figure 6-1. Area Type Object and Area Tables

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Up and down table arrows used for navigation

Object Status for these area types is protected

Cell status is protected when object status is protected

Area types have protected status, though users can add rows to protected objects

More columns may be visible, if your screen is set wider than the example

Area Type			
	Area Type Name	Area Type Site	Gr
P	Climate Factor Area	NSSC Pangaea	NATIONAL ADMIN
P	County or Parish	NSSC Pangaea	NATIONAL ADMIN
P	MLRA	NSSC Pangaea	NATIONAL ADMIN
P	Non-MLRA Soil Survey Area	NSSC Pangaea	NATIONAL ADMIN
P	Rainfall Factor Area	NSSC Pangaea	NATIONAL ADMIN
P	State or Territory	NSSC Pangaea	NATIONAL ADMIN

Note: Several ways exist for navigating through tables: clicking with the mouse, clicking the up and down table arrow buttons, and using the TAB, SHIFT+TAB, Or ENTER keys. For some data entry actions, using the keyboard is faster. The "References" section of online help contains a keyboard guide.

- Click in the **Non-MLRA Soil Survey Area** row, then click the **Down table** button

Use the arrows to view the other Area types and areas associated with them

Area					
	Seq	Area Symbol	Area Name	Area Acres	Rec
-		TD005	CANYON COUNTY, TEST DATA	467100	
-		TD009	GILPIN COUNTY, TEST DATA	775300	
-		TD015	ROCKINGHAM COUNTY, TEST DATA	464900	
-		TD609	MARIPOSA AND BELL COUNTY, TEST	912400	

Note: The Area table is now displayed. It shows the four records associated with the Non-MLRA Soil Survey Area Type. The Area Type, Area, and Area Text tables are said to be within the boundaries of the Area Type object.

Crossing Object Boundaries to the Legend Table

In NASIS, the soil survey area is separated from the legend. The legend name is no longer interchangeable with the soil survey area name. Refer to Figure 6-2 for an illustration of the separation of area from legend.

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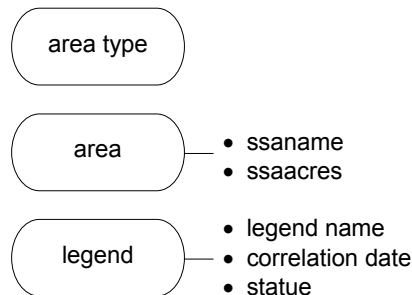


Figure 6-2. Separation of Soil Survey Area and Legend

Note: The selected set now contains a copy of all areas in the permanent tutorial database, not the permanent data itself.

Because one area can have many legends, you can record, for example, both an out-of-date legend and an updated legend for a soil survey area. Each legend, however, can be part of only one survey area.

Because the area type object and the legend object are independent, navigating to the legend for a particular survey area (in this case, survey area TD009), requires a leap across object boundaries, as shown in Figure 6-3. To load the legend, you could either run a query that focuses on the Legend as target table, or use the Load Related command.

Figure 6-3 shows both the Area Type and Legend objects. Object boundaries are marked by the larger rectangles. The dashed lines between tables in the two objects indicate crossing points for moving from one object to another.

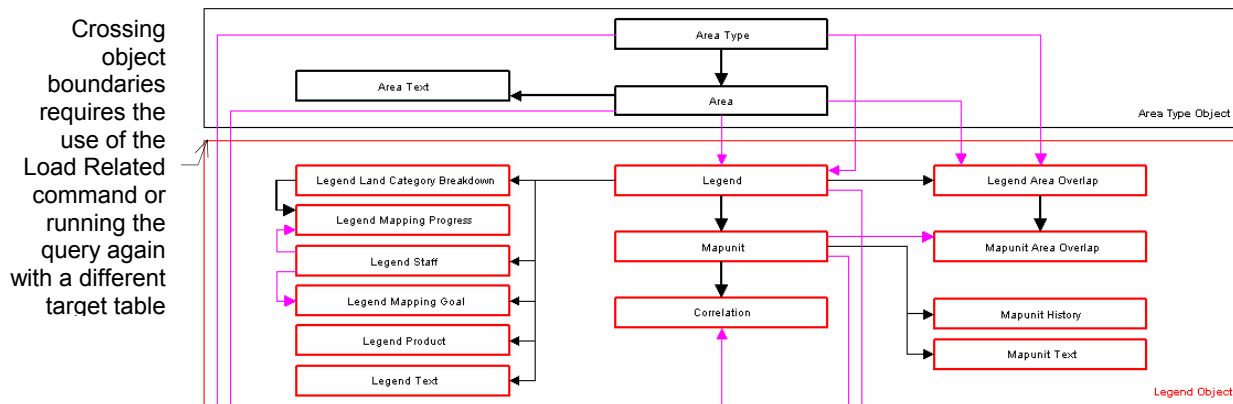
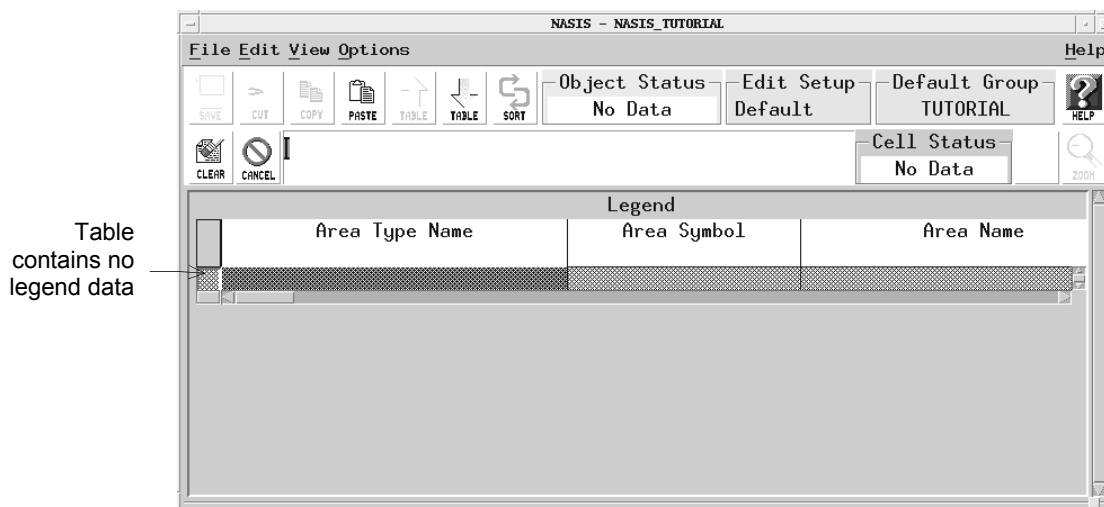


Figure 6-3. Crossing of Object Boundaries Via Load Related or Select Manager

Locating object boundaries

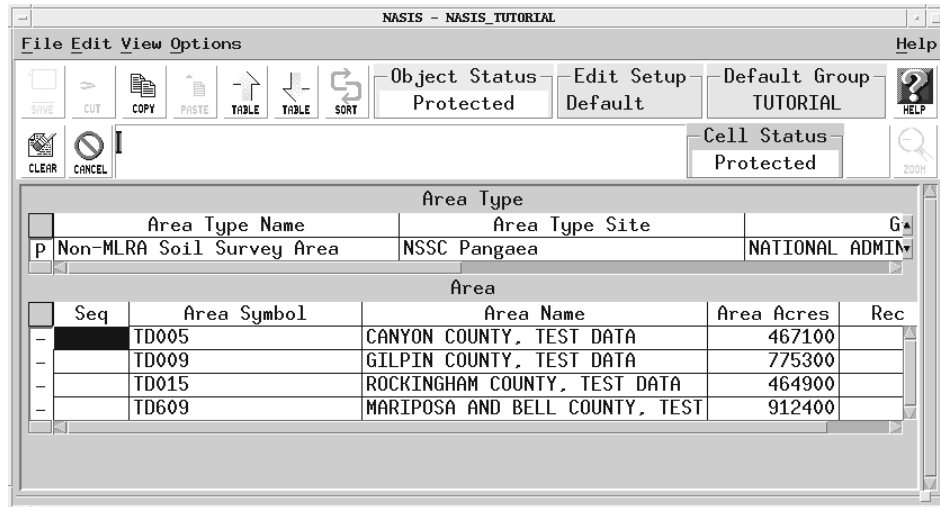
First, let's examine the Legend table.

1. On the **View** menu, click **Legends**, then **Legend**.



Note: The table is empty, because we have not yet loaded data into the selected set. The Tutorial - Area Types and Areas query only loaded data for the Area Type object. Area Type objects are independent from the Legend objects.

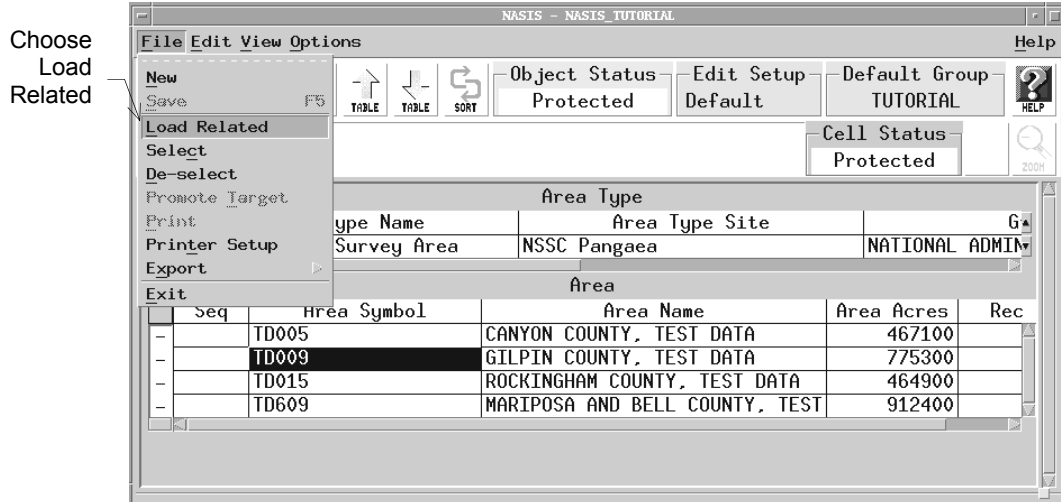
2. On the **View** menu, click **Area Types**, then **Area**.



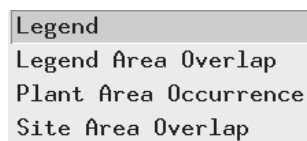
Note: The selected set still contains the area type and area information loaded by the query. The tables listed when you click Area Types on the View menu are all the tables within the area type object.

Crossing from area table to legend table

1. To load the legend that belongs to Area TD009, in the Area table click the **TD009** row.
2. Click the **File** menu and select the **Load Related**.

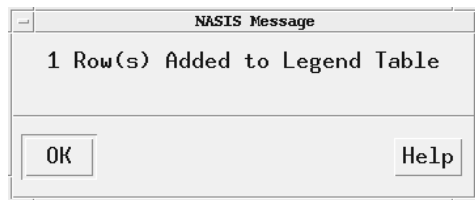


Note: A submenu lists tables that may contain data related to that contained in the Area table. The tables listed on the load related submenu vary depending on the table your cursor is in when you choose load related.

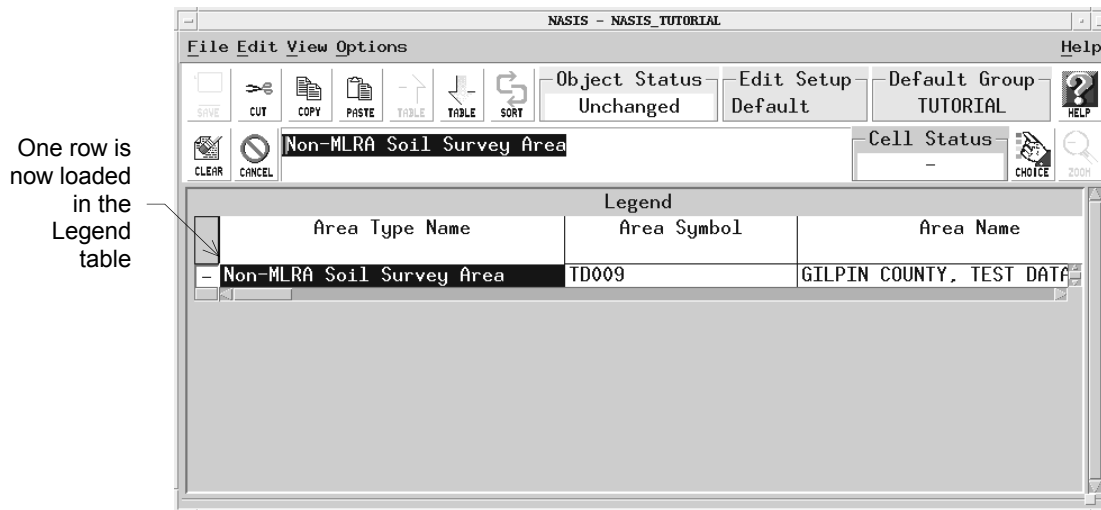


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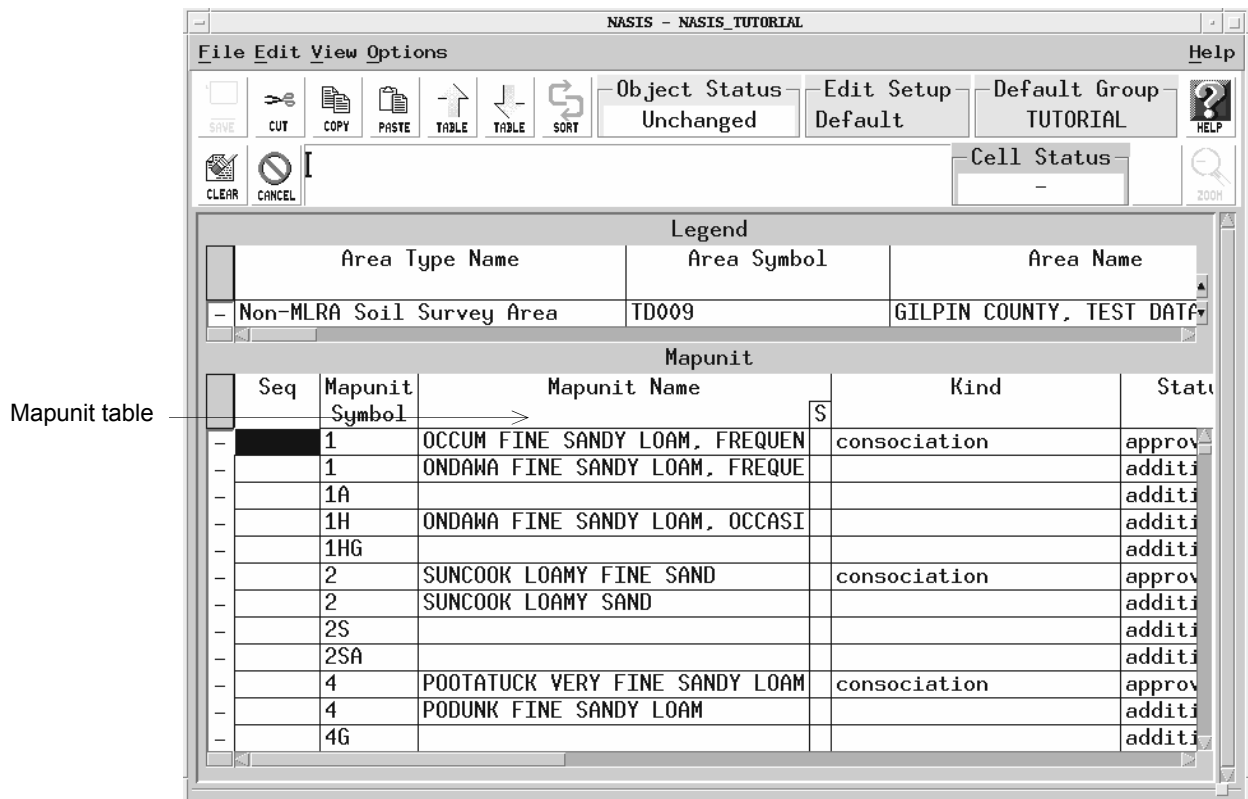
3. Choose **Legend** on the Load Related submenu. A message appears indicating that one row was added to selected set, click **OK**.



4. To look at the legend, on the **View** menu choose **Legends**, then **Legend**. You see the legend associated with the survey area TD009.



5. After viewing the Legend table, click **Down Table**.



Note: If you followed the lessons without moving to other tables, the Mapunit Table is displayed. However, if you chose to view other tables, such as the Legend Area Overlap or Legend Staff, your default down table path may have changed. Simply click **View** menu, **Legends**, then **Mapunit** to display this screen.

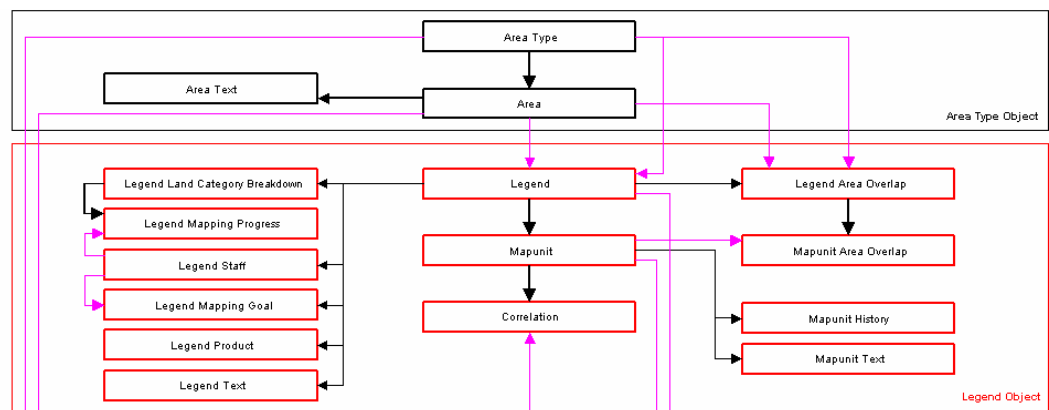


Figure 6-4. Mapunit Table Within the Legend Object

Note: As you took at the Mapunit table, you may be wondering, "If this is the mapunit table, where is the mapunit data?" Recall that NASIS separates the map unit name and symbol from the map unit data and that they are linked through the Correlation table.

Note: The mapunit data associated with mapunit symbols is stored in the Data Mapunit table. Once again, you will need to cross the boundaries of two independent objects-Legend and Data Mapunits-while loading only those records related to the specific mapunit. Figure 6-5 on the next page illustrates the crossing between the two objects.

- Open the Correlation table for **Mapunit Symbol 1-Occum Fine Sandy Loam** by first clicking that mapunit in the Mapunit table, then clicking the **Down table** button. The Correlation table appears. This table links Mapunit Symbol 1 to its actual physical, chemical, and morphological data.

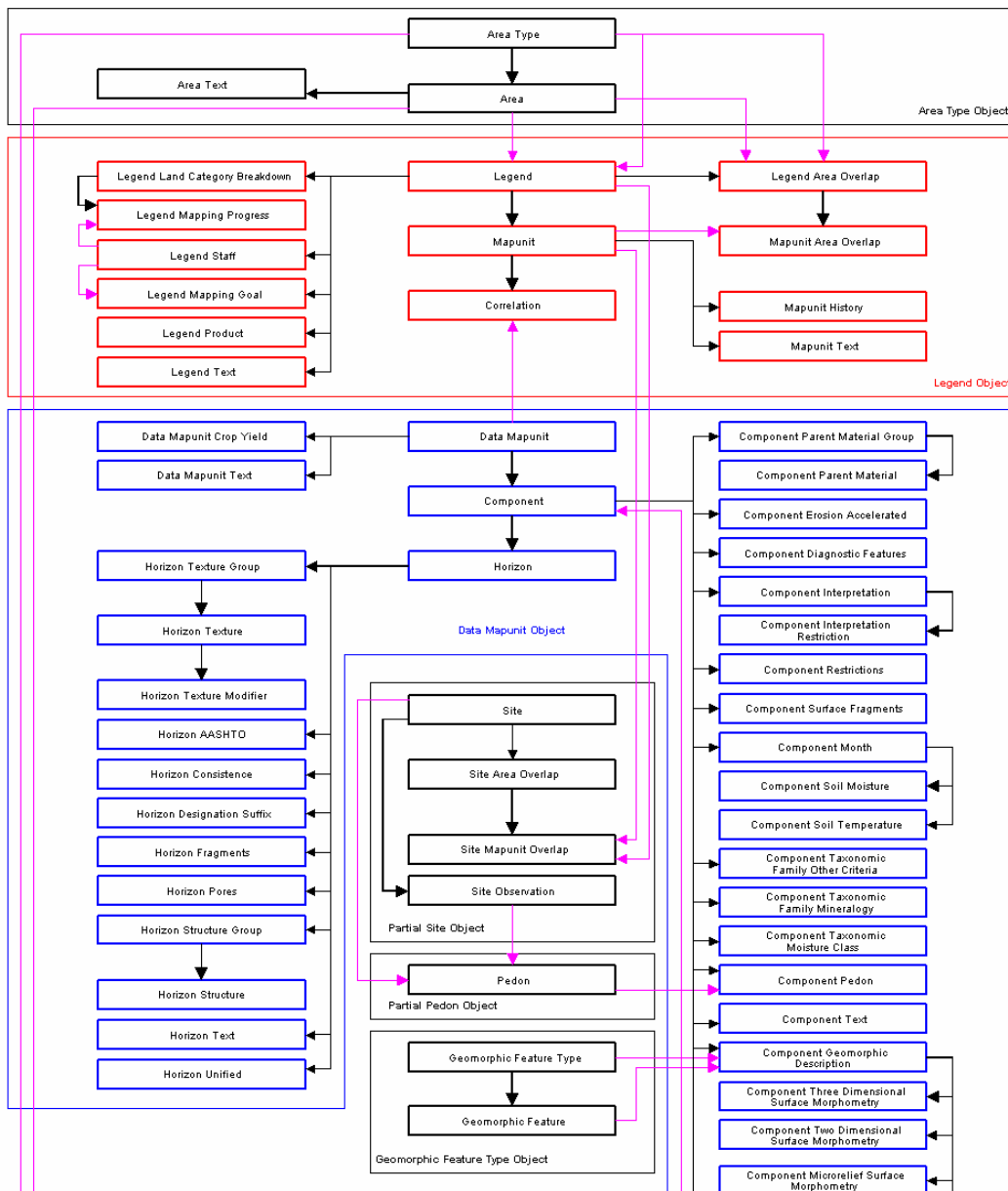
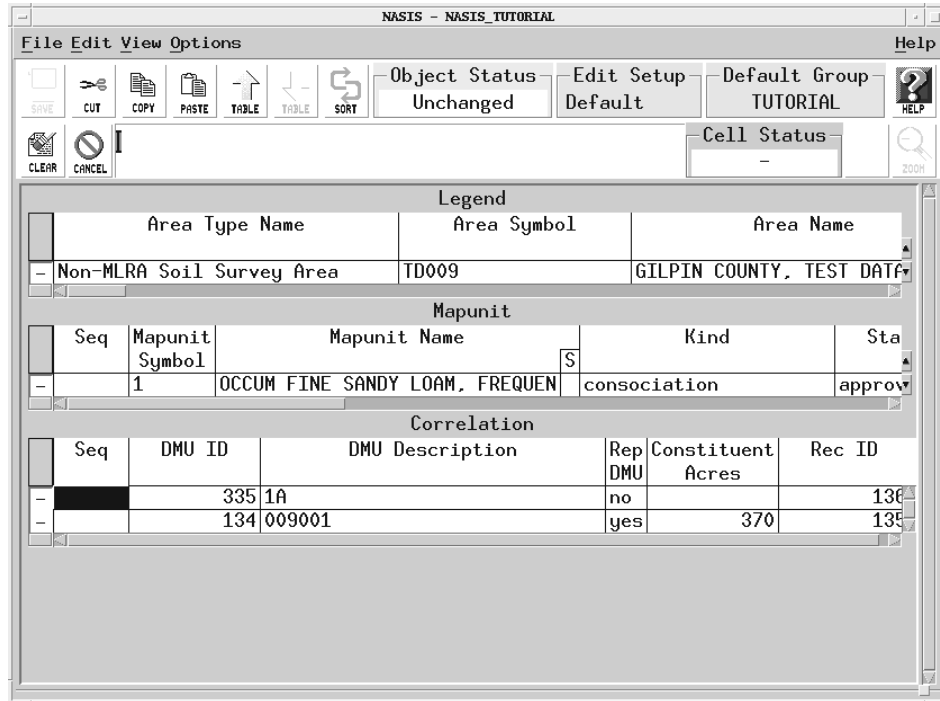


Figure 6-5. Crossing Between Legend and Data Mapunit Objects

Up to this point, the diagrams have presented a hierarchical view of just a few of the objects in NASIS. There are several other objects and load related relationships. Familiarity with the load related relationships between the various objects and tables will simplify building your selected set. Two structure diagrams provided with this manual show the load relationships for the map unit data and for the site and pedon data. Those who do advanced work in NASIS, such as query and report writing should study the *National Soil Information System 5.1 Database Structure Diagrams* document, which is available through the NASIS homepage on the internet.

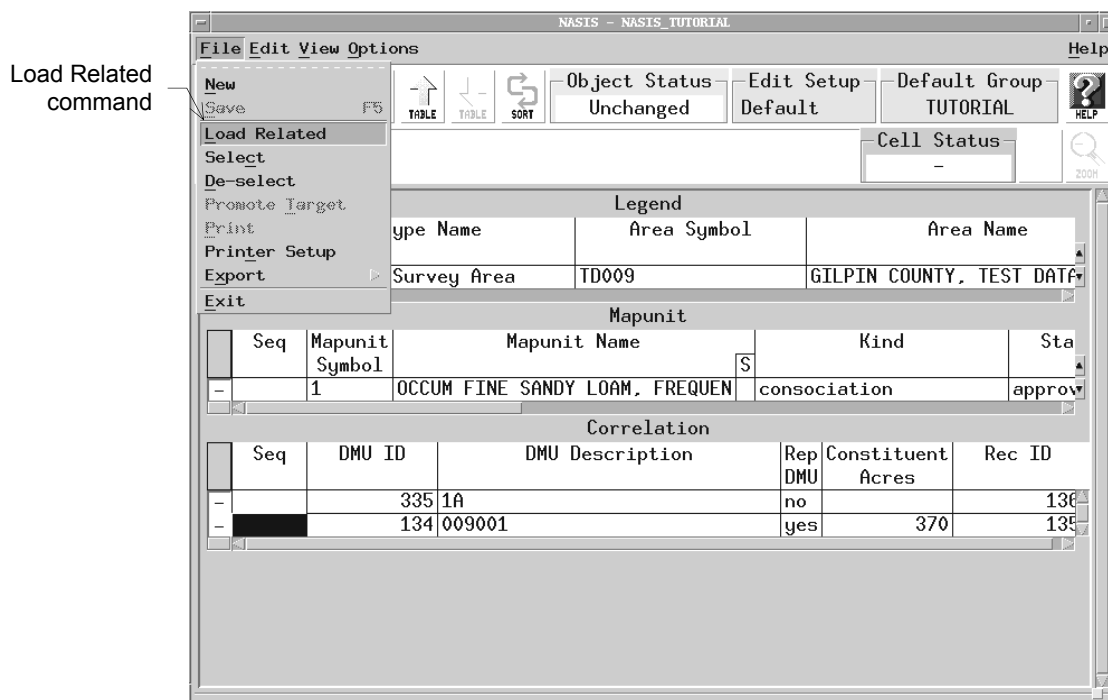


- In the Correlation table, scroll to the right and notice that one record is designated a representative data mapunit (Rep DMU) and one is not. Highlight the representative data mapunit for this mapunit.

Note: Currently, your selected set does not contain the data mapunit. It contains the six area type and area records, and one legend record that includes its mapunit symbols and names in the Mapunit table.

- To load the representative data mapunit for Mapunit Symbol 1, select the **File** menu, **Load Related**, then **Data Mapunit**.

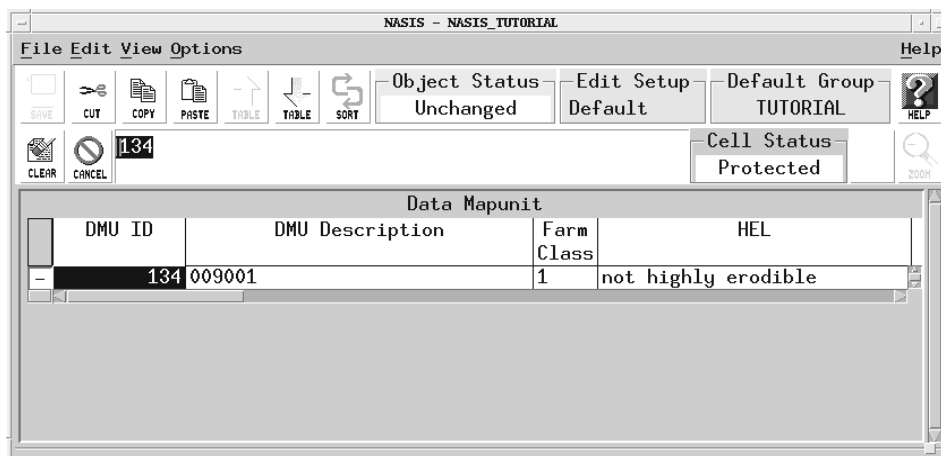
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9. A message appears indicating that one row was added to the selected set. Click **OK**.

10. Click **View** menu, **Find Related**, then **Data Mapunit**.

Note: Load Related allows you to bring data into your selected set as long as a connection exists between the table your cursor is in and the data you wish to include. Find Related allows you to move from the loading table to the data you loaded.



11. On the **File** menu, select **New** to clear data from the tables. You have now completed Chapter 6.